



**SOLVAY**

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# Meeting with Family Shareholders

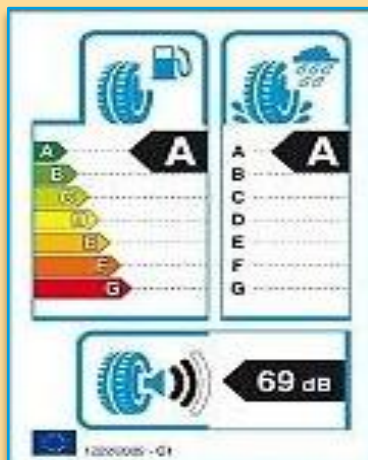
## Silica

An Nuyttens, President Silica

# GBU Silica

Growth through innovation for sustainable mobility

**HDS** (Highly Dispersible Silica)  
for **fuel-efficient & performance tires**

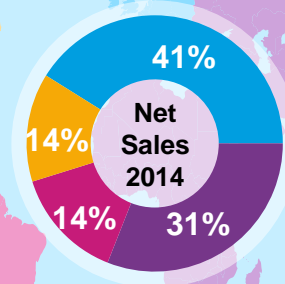


**North America**

1 production site

**Europe**

3 production sites  
2 R&I centers



**Latin America**

2 production sites  
1 R&I center

**Asia & RoW**

3 production sites  
1 R&I center



**€ 0.5 bn**  
Net sales 2014



**~ 700**  
employees



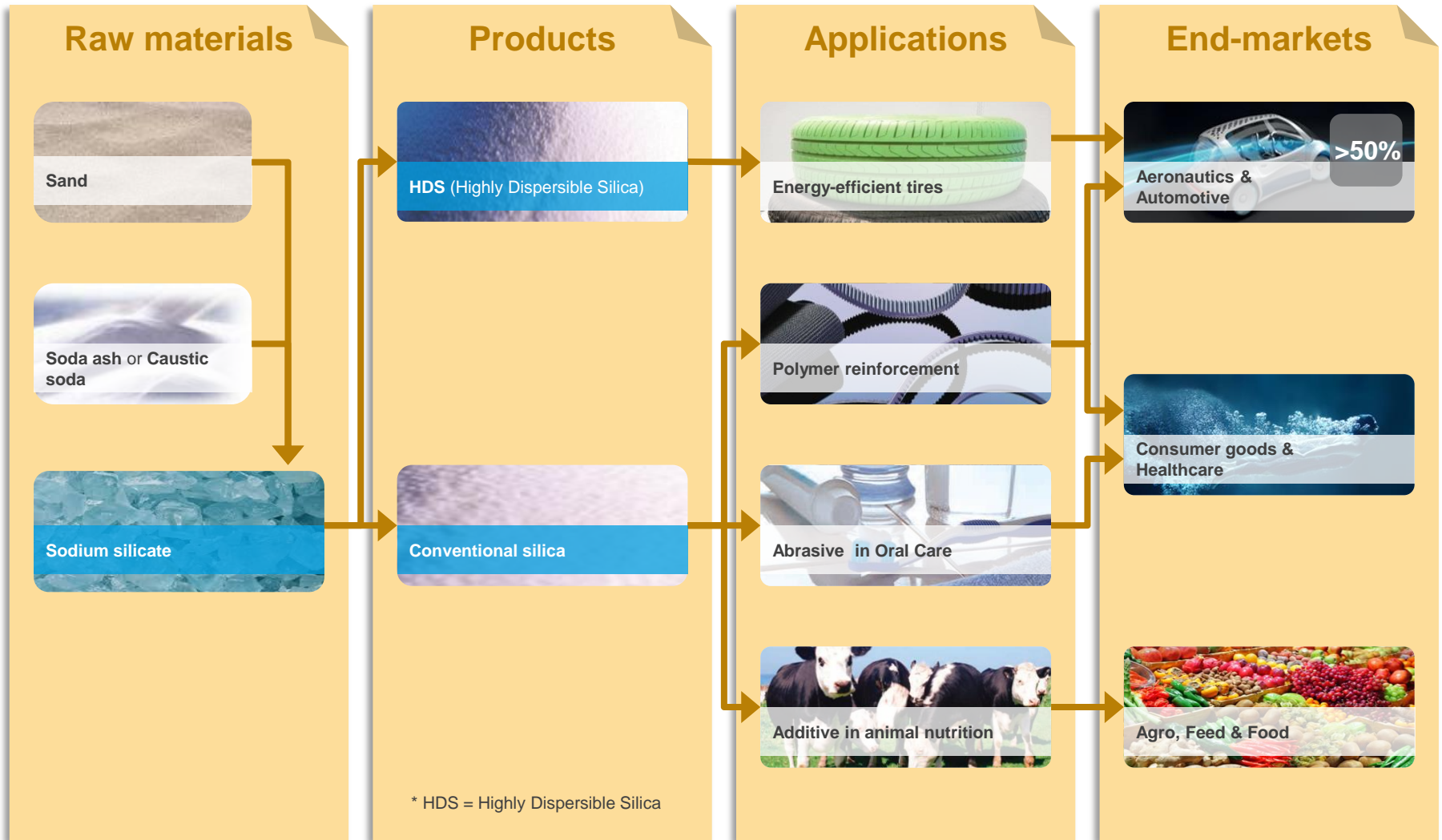
**9** production sites  
**4** R&I centers

# GBU Silica

## Key transformation process

Solvay  
products

approximate  
main end-market  
exposures



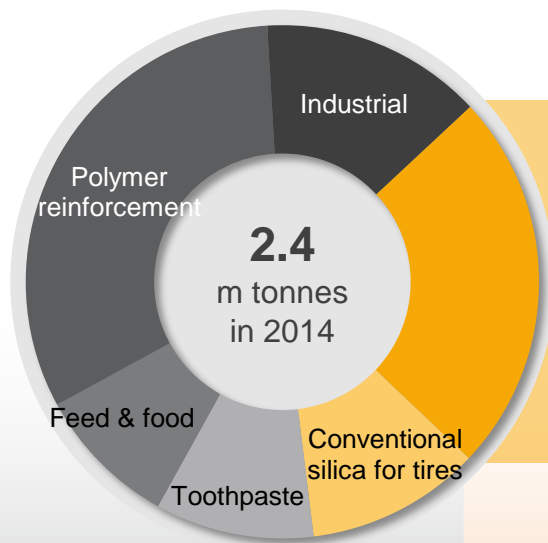
# Solvay is a key player in HDS for tires

## Amorphous precipitated silica market

CAGR<sup>14-20</sup>

↗ 5,5%

HDS = Highly Dispersible Silica  
(Silice Hautement Dispersible)  
TCAM = Taux de Croissance Annuel Moyen



Source: Roland Berger, Notch, estimations Solvay  
Market Size: 2014 data; Split per market: 2013 data

**HDS** for tires  
0.6 m tonnes in 2014

CAGR<sup>14-20</sup>

↗ 11%

## Main producers

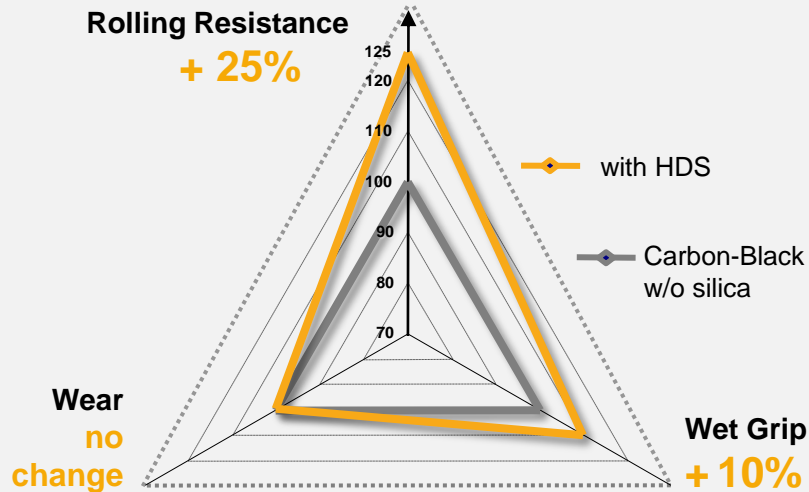
- Solvay
- Evonik
- PPG
- OSC

**Solvay active in all silica markets**

**Solvay**  
key player in HDS

# HDS delivers value to the tire industry

## Excellent technical performance ...



Enables a **5-7%** improvement in **efficiency**

Source: Smithers Rapra, Solvay estimates

## ... growing across a number of applications

### In passenger car and light trucks

- Energy-efficient tires
- Winter tires
- Sport tires

### In heavy trucks

- Commercial emergence of tires using a majority of silica instead of carbon black

\* HDS = Highly Dispersible Silica

## HDS: a significant enabler of performance

# Thanks to competitive position & environmental regulation

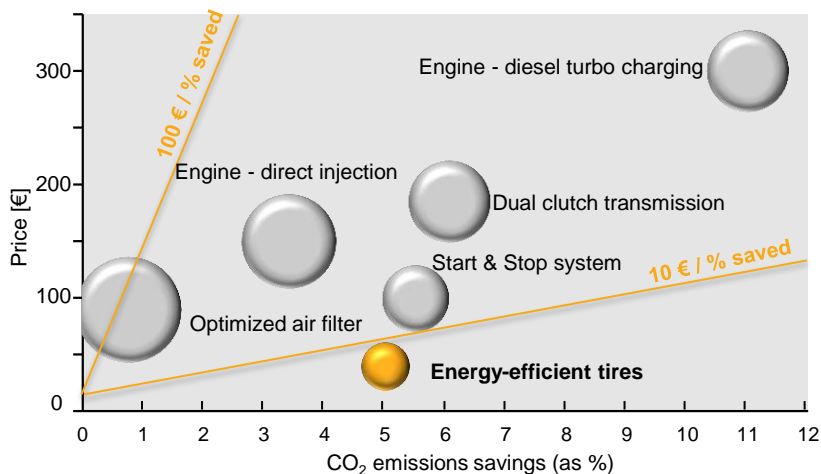
## Energy efficiency regulation on auto original equipment

### % mandated fleet CO<sub>2</sub> reduction (2010-2020)

	Japan	Korea	EU	Brazil*	US	China
CO <sub>2</sub> reduction	-10%	-10%	-33%	-12%	-40%	-37%

\* Basis is Innovar Auto program. Threshold of -12% is a 2017 minimum, not 2020

### Energy-efficient tires best positioned



Source: Roland Berger, Solvay Estimates

## Labeling regulation significantly impacts the tire aftermarket

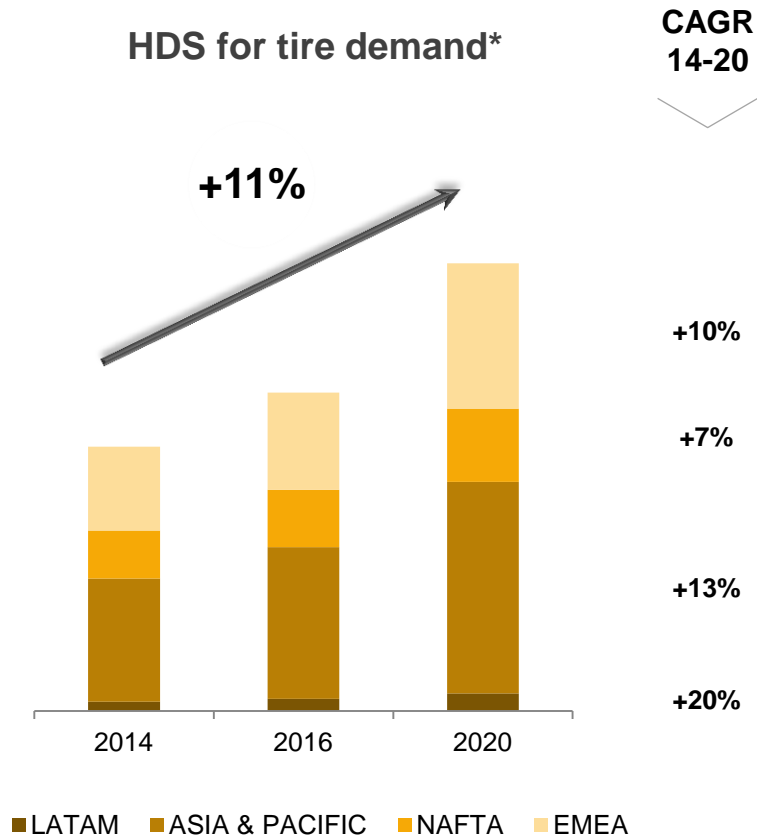


### Tire labeling scope

	Japan	Korea	EU**	Brazil	US	China
Rolling Resistance	✓	✓	✓	✓	✓	✓
Wet grip	✓	✓	✓	✓	✓	✓
Wear					✓	
Implementation	2012	2012	2012	2014	Draft legislation	Under review




\*\* Australia, New Zealand, Israel also adopting an EU style labeling scheme by 2016

# ... HDS benefits from solid growth



Source: Roland Berger, estimations Solvay  
For passenger cars and heavy duty

## Drivers for growth

	Tire production 	Energy- efficient tire penetration 	Increased silica use per tire 
EMEA*		✓	✓
NAFTA		✓	
ASIA	✓	✓	✓
LATAM	✓	✓	
	~25%	~50%	~25%

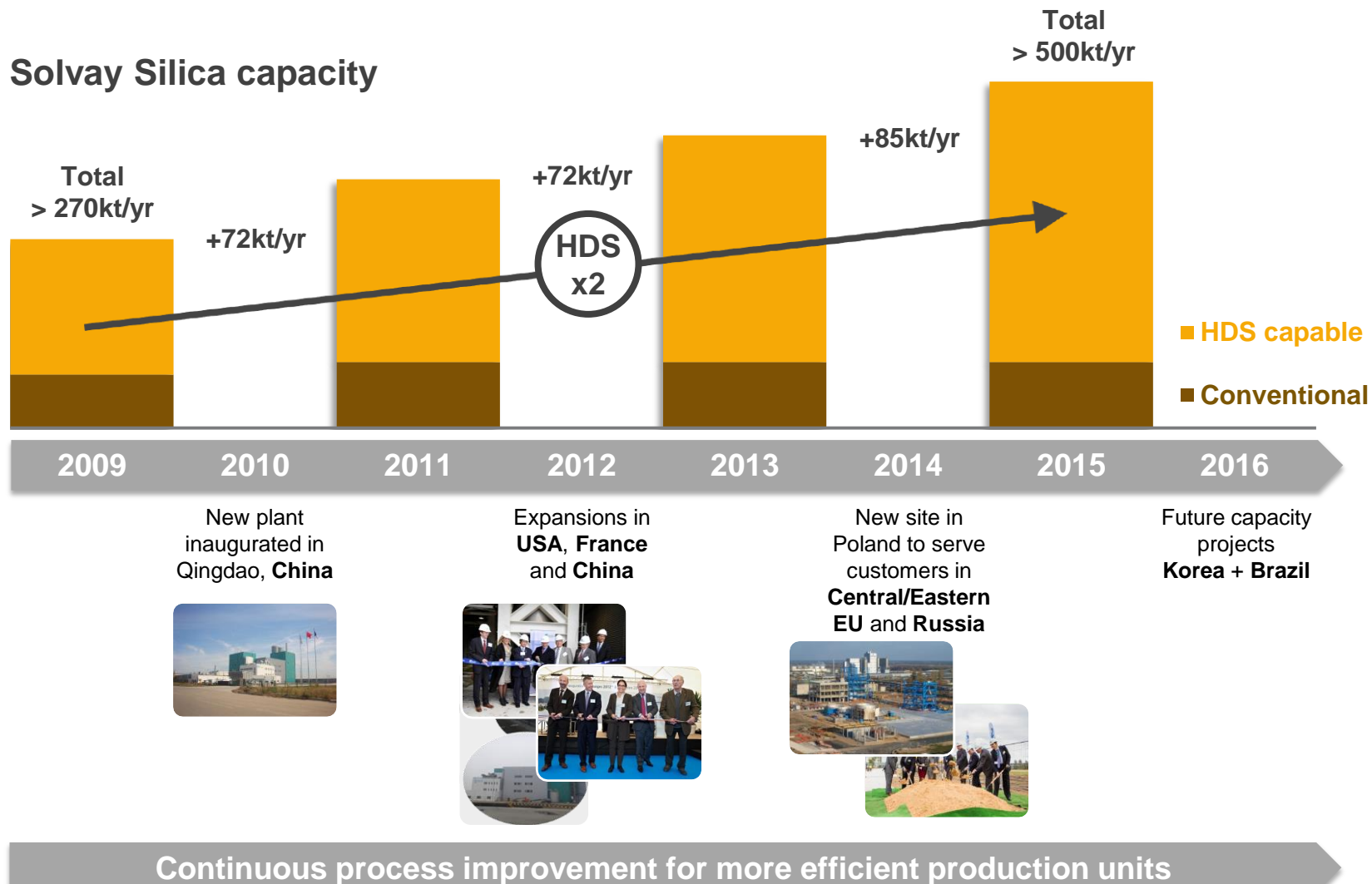
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**Contribution to overall growth**

\* Includes Russia



# Regular investments to meet market growth opportunities





# Pursued innovation delivers value

## Allowing to stay ahead of competition

ZEOSIL® PREMIUM

### New generation HDS for further fuel savings

- Better rolling resistance
  - ➔ Improved label
- Improved wear
  - ➔ Lighter or longer life tire
- Better dynamic properties
  - ➔ Increase handling for UHP tires



ZEOSIL® 1085 GR

### Specifically engineered for performance in winter and Nordic conditions



efficiium™  
by ZEOSIL

### Increases productivity of HDS tire manufacturing

- Cuts processing gap for tire makers vs. carbon black



- Silica compatible with truck tires
- Enhanced productivity, combined with tire performance gains, leads to a significant adoption potential at our customers.

efficiium®  
by ZEOSIL

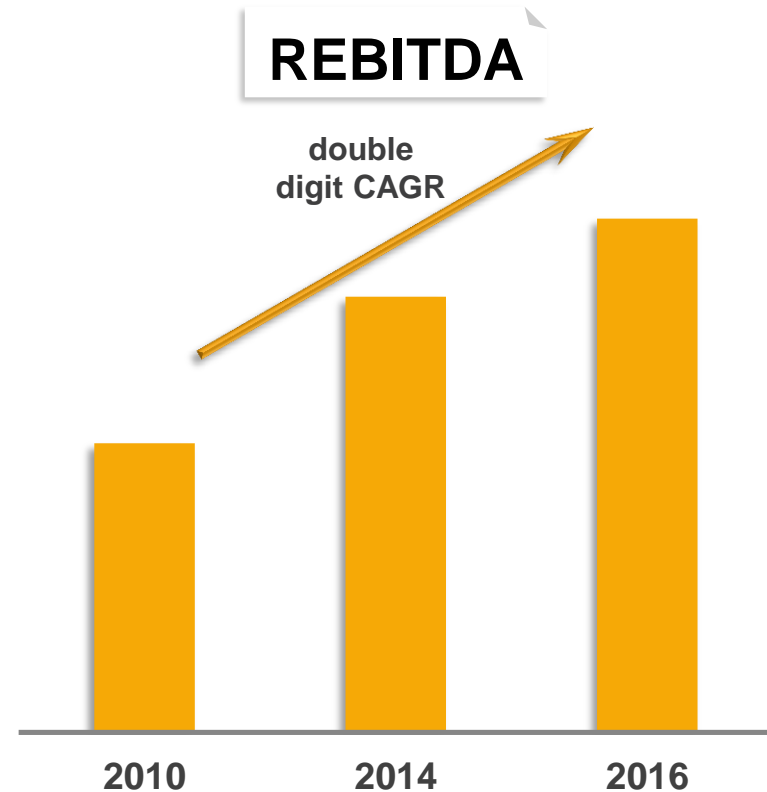
▶▶ Get a head start

The new Highly Dispersible Silica for Productivity and Performance



# A successful growth strategy

- **Double digit growth** in line with the HDS market, driven by **energy-efficient tire** demand
- Maintain **strong market share** in HDS for tires through capacity **expansion, innovation** and **excellence**





**SOLVAY**

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